CHAPTER 1

INTRODUCTION

1.1 Background of the study

Over the years, in a large number of classrooms, teachers still 'lecture' students and tell them what to do. Often the one and same method of teaching is applied to all the children at the same time, and every day in most lessons. It is common to observe children reciting and committing to memorizing numbers, letters of alphabet, and text with little or no understanding, especially in the primary schools. The joy of learning and learning how to learn is absent in many classrooms (Campbell, 1999).

Students (adults or children) have capacities that can be tapped for optimal learning, of which many teachers are often unaware. A student could be wrongly labelled as not intelligent or smart simply because he or she cannot perform a learning task in a way prescribed or expected by the teacher. If the teacher could observe or discover other channels or avenues through which learning can occur, much of the frustration that so-called 'dull' students experience could be removed (Armstrong, 1987). In addition, learning approaches based on scientific knowledge of the human body and how learning occurs can help to determine what works best for the individual child so that his or her needs may be met in the most effective manner (Gardner, 1999).

Sound knowledge about the ways in which the human brain processes information and reacts to external stimuli is essential for teachers so that they can begin to understand and apply the relevant principles in the classroom situation, draw out the individual students' potential and ensure effective learning. So, it is important for teachers and students as well to know that intelligence is not a fixed attribute that a child is born with or without, but one that can be developed and enhanced, at any stage of one's life. Intelligence comes in many forms, not just one (Gardner, 1983). The theory of Multiple Intelligences is a theory that outlines seven ways (the latest is eight) in which one can acquire knowledge including the learning of a second language.

Hence, this study was carried out in conjunction with the introduction of Gardner's Multiple Intelligences in learning English Language in schools in Terengganu. In view of the low success rate in all-public examinations in English Language such as Ujian Penilaian Sekolah Rendah (Standard 6), Penilaian Menengah Rendah (Form 3) and Sijil Pelajaran Malaysia (Form 5), Gardner's theory has been applied in the teaching of English Language subject as an alternative method or approach in all secondary schools in Terengganu since April 2000.

1.2 The significance of the study

The study is important in order to establish any influential relationships between Gardner's Theory and Second Language Learning. It is also important as a measuring stick on the effectiveness of Gardner's theory when applied in Second Language Learning because no study has been found in Terengganu after its introduction to the English Language teachers in February 2000. There are two major and essential international projects which were seriously taken into consideration in guiding the researcher when doing this research especially during the implementation of MI in the classroom; Project ZERO and PROJECT MITA.

Project ZERO has been carried out at the Harvard Graduate School of Education since 1967. The mission of this project is to understand and enhance learning, thinking and creativity in the arts, as well as humanistic and scientific disciplines at the individual and institutional levels. When Dr. Gardner took full charge of the project in 1972-2000, he applied MI as one of the elements of the research methodology, and his efforts were significantly productive. Since then, much of the researches have been documented in more than 500 published articles and books. However, most importantly, the project has been used as a guide not only is designing certain academic syllabus but also as one of the remedies in learning and teaching problem at any academic level.

Whereas, Project MITA (Multiple Intelligence Teaching Approach) was designed by Dr. Weber at Houghton College, New York to help resolve problems in diverse populations to 'cure' complex problems in authentic learning situations. The project has five complex phases which should be applied step-by-step to those PBL (Problem based learning) students. The project has been carried out since 1985 until now and so far the results have been very promising. Hence, the researcher has used the principle of Weber's research as a core reference besides the Project ZERO in investigating the effectiveness of MI approach in learning, thinking and creativity among students at tertiary levels.

1.3 Objectives of the research

Throughout this dissertation, the researcher attempts to achieve several crucial objectives pertaining to Multiple Intelligences (MI) and Second Language Learning, which are:

i) To investigate the effectiveness of MI application in the teaching of English.

ii) To investigate the influence and effectiveness of Multiple Intelligence (MI) in the learning of English language.

iii) To identify the dominant intelligences of MI among the subjects.

1.4 Research Questions

Since the topic of this research is considered new in academic writing of our country's education. Two research questions will be the focus of this study.

i. Has the method used in MI theory affected the standard of English among the secondary school children?

ii. If the approach used in MI in the learning and teaching of second language has shown positive effects to the students, what then are the reasons for this?

Furthermore, the researcher only focused on the teaching of Second Language Learning to the selected group of students in applying Gardner's theory which was held from early 2000 until the middle of 2001. At the same time, all relevant comments, observations or opinions regarding the students' performance were taken into consideration to make the research more valid and reliable.

1.5 Limitation of Study

The researcher decided to choose his own Form 1 students of SMK Sultan Omar, Dungun, Terengganu as the subjects because they were suitable for the research due to the aspect of multi-racial classroom and the students had mixed ability and mixed standard of English proficiency. In addition, most of the teachers who taught the students had been exposed with MI compared to that of other teachers. Therefore, it was easier for

the researcher to gain any valuable information and response regarding the research. Although the main focus of the research was applying MI in Second Language Learning, the responses from other lessons were also taken into consideration in evaluating and comparing the students' progress. The administration of the school also gave full cooperation in applying the MI approach for the sake of students' performance. All of the students had given tremendous cooperation even though they knew nothing about the research because none of the teachers had mentioned earlier about the research to them to secure its validity and originality.

1.6 What is intelligence?

When we talk about intelligence, it is vital to view it in the aspect of psychology which includes general mental abilities such as calculating, reasoning, classifying, learning, using the language, and adjusting to new situations (Pyle, 1979). Therefore, it is widely accepted that although potential intelligence is related to heredity, the environment is a critical factor in determining the extent of its expression. Both, the gene of an individual and the surrounding factors such as family, peers, culture, education system give great effect in developing one's intelligence (Armstrong, 1991).

Many learned figures give their own definitions of 'intelligence' for instance Binet (1966), defines it as to judge, comprehend and reason well; Spearman (1975) says general intelligence involves mainly the 'education of relations and correlates': Terman

(1970) believes it as the capacity to form concepts and to grasp their significance; Vernom (1966) stresses it as 'all-round thinking capacity' or 'mental efficiency'; Burt (1967) accepts it as the innate, general, cognitive ability; Heim, 1975) defines it as an intelligent activity in grasping the essentials in a situation and responding appropriately to them; Echsler (1973) says it is to aggregate or global capacity of the individual to act purposely, to think rationally and to deal effectively with the environment and lastly Piaget (1969) defines 'intelligence' as an adaptation to the physical and social environment (Pyle, 1979).

When people talk about intelligence, the best way to measure it is using Intelligent Quotient (IQ) test (Sternberg, 1984). However things like perseverance, self-discipline, and appropriate emotional behaviour are now considered more important than IQ. Human intelligence is regarded as the highest achievement of evolution, the product of uncounted thousands of years of development. A psychologist, Binet formulated The Intelligence Quotient (IQ) in 1984 to formulate a test that could be used to analyze a child's intelligence in order to uncover his or her weakness (Sternberg, 1984).

Gradually, in the United States of America (U.S.A), the school administrations used it to rank students as more or less capable in school. The IQ test went on to become a near-national standard. Later, the measuring of raw intelligence with tests continued in all areas of education, for instance, the introduction of SAT (Scholastic Aptitude Test)

which analyses a student's Mathematical and grammatical abilities as well as reading comprehension and vocabulary.

Nowadays, various types of tests have been created from kindergarten level to university. Currently, the most widely used intelligence tests in the U.S.A are the Wechsler Intelligence Scale for Children (WISC) and the Wechsler Adult Intelligence Scale (WAIS) developed by David Wechsler in 1955. The tests consist of verbal and performance scales and then presented as a verbal IQ, a performance IQ and a full-scale IQ. It is believed that from time to time many more tests will be formulated in order to test man's various intelligence (Armstrong, 1991).

Binet and Simon developed the first modern intelligence test in 1905 for the French school system. Other tests commonly used in the past include the Army Alpha Test introduced by Brigham in 1923 which was first administered during World War 1 to identify the intelligence of the recruits by race (at present called as Scholastic Aptitude Test).The original version was later revised and called the Revised Stanford-Binet Intelligence Tests, developed by Lewis Terman in 1930s which were widely used together with other intelligence tests.

However, researchers, educators and even parents have reservations that tests such as WISC (Wechsler Intelligence Scale for Children) and WAIS (Wechsler Adult Intelligence Scale) do not really judge a student's potential. The tests merely demonstrate

that a child is or is not good at standardized tests. One criticism of intelligence tests is that test items may be meaningless or more difficult for members of different sociocultural groups (Caine, 1999). Thus, the students should be given opportunities to flourish or show their potential and not be judged by what they cannot do, but what they can do (Armstrong, 1991).

Test findings in the United States of America, however, closely correlate with career and academic achievement. In a research done by a group of scholars headed by Machado (1980), it was said that intelligence test is applicable for academic purpose for further studies, career promotions and so on. In other words, the score of the test is highly influenced by the interest and the goal of the person who sits for the test. If he desperately needs to score in the test, he will do anything to be prepared for it.

In response to the criticism that intelligence is an attribute of the entire personality and cannot be measured in isolation, pure intelligence tests have given way to tests that also measure special aptitudes and personal factors. Some theories have sought to broaden the definition of intelligence by identifying different types of intelligences (Pyle, 1979). According to Cockrell (1970) intelligence also means a speed at which a child is developing mentally and it may be taken to have different meanings at various stages of development, and sometimes means the ability to profit from experience where a person might be labeled intelligent if he is 'effective' or 'adequate' or 'capable' in some

general way. Other related words, which carry various meanings of "intelligence", are described as **'ability'** which is an ability is what a person can do at this moment, e.g. changing a car tyre or writing an essay, **'capability'** means what a person is thought capable of doing in the future on the strength of information gathered in the present.

In other words, intelligence here may be taken to mean capability or ability to learn which can be used in the future and **'measured intelligence'** is a person's results on some test of ability generally referred to as the IQ (Intelligence Quotient).

1.7 Theories of Intelligence

According to Lohman, (1993) most educators and many psychologists think intelligence tests measure or ought to measure something like the innate capacity or potential of learner". He continues to say that this has always been a popular belief among both professionals and laymen and is not easily altered by disconfirming evidence.

Intelligence has been defined and studied under a number of different rubrics, among them individual differences, cognitive abilities and aptitudes. Sternberg (1984), Horn (1989) and Gardner (1983) serve as a representative sample of researchers who have made significant gains in our current conceptions of intelligence.

Sternberg's (1984) theory of intelligence contains three sub theories, and they are about context, experience and the cognitive components of information processing. The contextual sub theory attempts to specify what would be considered "intelligent" in a given culture or context. According to Sternberg, culturally intelligent behaviour involves either adapting to one's present environment, selecting a more optimal environment, or reshaping one's current environment. An example, if a Malay student who is fond of playing *sepak takraw* and studies in a Chinese school, he might be a basketball player as a result of the environment. The experiential sub theory claims that the expression of any intelligent behaviour will be a function of the amount of experience one has with the particular class of tasks being tested which means that when someone has mastered a certain ability, he might make full use of it either for good or bad purposes. For example, a person who is good at surfing the Internet might use the skill to gain knowledge or cheat people via the Internet.

Sternberg (1984) further adds that intelligence is best demonstrated when the task is relatively novel or unfamiliar. It means that when the test is widely accepted by people such as a public examination, the intelligence based on the score of the test is considered significant. Furthermore, when the score of the test is used in selecting eligible candidates for certain purposes such as for qualification of university admission, promotion or even driving license, the candidates who are considered intelligent will get proper recognition even though they are only good at certain respective fields. He adds that the componential sub theory describes the cognitive structures and processes:

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metacomponents (which control and monitor processing), performance components (processes that execute plans), and knowledge acquisition components (which encode and assemble new knowledge). In general, the theory claims different aspects or kinds of intelligence, for examples academic and practical. In other words, intelligence is viewed as a form of mental self-management. This can be seen in a Second Language Learning, such as when an unfamiliar task is given to a student and the student is able to accomplish it (such as writing a formal letter), then he or she is considered as intelligent. Sternberg's understanding of intelligence is in line with Gardner's theory (1983).

Later, Horn and Cattell (1989) introduced a theory of intelligence that specifies two broad factors known as fluid abilities and crystallized abilities. Fluid intelligence (Gf) represents one's ability to reason and solve problems in novel or unfamiliar situations. The problem solver develops techniques for solving problems that are new and unusual from his own perspective. Similar to Sternberg's, Crystallized (Gc) intelligence on the other hand indicates the extent to which an individual has attained the knowledge of a culture. Individuals with this ability bring previously acquired, and often culturally defined, problem-solving methods to bear on the current problem. The problem solver knows the methods and recognizes that they are relevant in the current situation. An extension to this theory is the Visual-spatial (Gv) reasoning which is a somewhat specialized ability in the use of visual images and visual relationships in solving problems. Interestingly, visual-spatial reasoning appears to be an important part of

understanding Mathematics. It requires one to construct in his mind a picture of the sort of mental space for factor-analytic studies.

This Gf-Gc-Gv theory can also be thought of as a theory of Multiple Intelligences (MI) because of the relative independence of fluid and crystallized abilities (characterized by distinctly separate patterns of co variation). Horn (1989) wrote:

> The expressions of these abilities "are outcroppings of distinct influences operating through development, brain function, genetic determination and the adjustments, adaptations and achievements of school and word"(1989: 67).

In this study, when the subjects (students) were having Newspapers In Education period, the subjects actively searched for pictures which were appropriate to the sentences or descriptions given. Here, the subjects not only imagined or visualized the expected pictures but also tried to modify their descriptions. One of the most popular views of intelligence is found in Gardner's theory. When first asked to define intelligence, Gardner (1983) wrote:

> To my mind, a human intellectual competence must entail a set of skills of problem solving which enables the individual to respond to genuine problems or difficulties that he or she encounters, and, when appropriate, to create an effective product and must also entail the potential for finding or creating problems- thereby laying the groundwork for acquisition of new knowledge (1983: 44).

In other words, if a person is able to make full use of his ability and capability in completing a task or solving a problem, the person actually is intelligent.

These perceptions of intelligence represent Gardner effort to focus on the strengths and abilities that those people possess, which are important in a particular cultural context. Gardner (1983) believes that intelligence is a biopsychological potential. He claims that there are seven relatively independent intelligences. MI theory "is especially significant for aspiring teachers because it provides an understanding of the variety of talents that students might bring to the classroom, talents that may or may not be seen easily in the context of traditional school learning" (McCowan, Driscoll, Kelly & Haines, 1999: 19). These include logical-mathematical, linguistic, musical, spatial, bodily kinesthetic, interpersonal and intrapersonal. Both Gardner and Sternberg (Armstrong, 1994) have made educators reexamine the important connection between intelligence and school learning.

Armstrong also suggests that we have numerous forms of human intelligences in and around us, they reinforce the common sense realization that these cognitive competencies can only be partially measured by the mainstream timed-paper-and-pencil IQ-type of tests (Armstrong, 1994). However, as is so true in life, common sense is not all that common. Most current schooling systems continue to interpret intelligence as a singular item (Prior, 1999) as most school systems in the world still believe that intelligence should be separated based on the needs of passing a certain examination.

Furthermore, hidden qualities such as patience and friendliness are not asked in formal examinations.

Over the years, there have been two distinct schools of thought on the nature of intelligence. According to the old school of thoughts, intelligence was measured by number, and the new school of thoughts believe that intelligence is not numerically quantifiable and shown during a problem-solving process. The former also believes that intelligence is fixed at birth, unitary, measured in isolation and used to sort pupils and predict success, whereas, the latter feels that intelligence can be developed and changed, can be reflected in many ways, can be measured in real-life situations or in context, and is used to understand the varied and different ways that affect students' achievements. Therefore, as a result, the scholars who have new understanding of intelligence perceive that every aspect of life should be taken into consideration in testing or evaluating one's intelligence, for instance the biological or genetic reasons, social and economic factors, needs assessment (the importance of certain test to certain intelligence). These beliefs have an effective causal explanation (Harggerty,1995).

On the other hand, the theory of one general intelligence separates an individual to fit only one intelligence does not encompass all people. In a study of the Brazilian street children, Krechersky (1994) found that they would most likely score poorly on an intelligence test, and be labeled with a low general intelligence. However, they are intelligent enough to do all math problems that were given to them. A drawback to one general intelligence school of thought is that it is heavily dependent on psychometric evaluations. Consequently, it cannot take into account the vast array of different talents that people have (Krechersky, 1994).

Some of the theories presented by the proponents of MI are excessive and have too many constructs to measure, for example, Guilford's theory (Pyle, 1979). According to Guilford's Structure of Intellect (SI) theory (1955), intelligence is viewed as comprising operations, contents, and products. There are five kinds of operations (cognition, memory, divergent production, convergent production, evaluation) six kinds of products (units, classes, relations, systems, transformations, and implications), and five kinds of contents (visual, auditory, symbolic, semantic, and behavioral). Guilford's theory is regarded as one part of MI branches because Gardner's idea of MI is considered a core which has been developed further by many other scholars including Guilford. Although Guilford named this theory differently, Guilford's theory also believes that intelligence should be viewed in a broader way. This means although we try to focus on a certain intelligence, it may also affect or reflect other intelligences. As a result, there are abundance of ideas in MI which conquer almost everything related to intelligence.

However, there are reasonable explanations of intelligence put forth by those from the school of Multiple Intelligences (Harggerty, 1995). Gardner's theory has a very clear causal explanation for intelligence, like the explanation of one general intelligence. Unfortunately, it is very difficult to pinpoint and confirm Gardner's hypotheses experimentally, because of the delicacy involved with the human brain. Sternberg's theory does not have a biological basis to it, and that detracts from its validity. But that may also be its strength (Sternberg, 1986).

The theory of Multiple Intelligences is a good alternative to be implemented even though it has to undergo some changes in order to fulfill the various demands (Armstrong, 1994). The theory does not focus on the brain and biological functions, but on different social situations (Gardner, 1983). Therefore, it applies to different social situations and environments, as none of the other theories does. But, given that there still is a substantial debate about the nature of intelligence, and no one theory is accepted by all, there is still room for improvement on any given theory (New City School, 1999).

According to Baron (1978) and Brody (1992), general intelligence can be divided into four types, which are from traditional to more current perception. Firstly, there is Narrative Intelligence. This is also known as an innate cognitive ability. Narratives tell what happened as well as what was important and why. Studies of language development suggest that children are genetically and socially disposed to learn the elements of narration very early, so they can then narrate and make sense of their daily lives. The next

type is the Strategic and Metacognitive Intelligence. This type of intelligence shows individuals who use strategic and metacognitive skills across a variety of tasks and domains to overcome or complete certain tasks. Then, the Practical Intelligence, where individuals who possess this intelligence can perform cognitive processes in some contexts but not in others. For examples, physical objects and tools, immediate social interactions, and the broader social and cultural context have significant effects on cognition.

Finally, there is the Social Intelligence where individuals can develop the sense that there are aspects of themselves which can contribute to a good moral development in society, they are able to adjust themselves with the surrounding, avoid getting involved in problems or even having an element of tolerance in different cultures or customs. For example, during out door activities like *gotong royong* in schools, Chinese students will not wear shorts to ensure that Malay students feel comfortable working together in doing the activity.

Hence, we can conclude that all of the theories of intelligence that are mentioned above have touched some elements of Multiple Intelligences, which make Gardner's view interesting and meaningful in the context of learning process.

1.8 What affects intelligence?

There are two major factors which affect intelligence, and they are inside and outside, which might play important roles in influencing the 'degree' of intelligence (Gardner, 1991). The inside factors can be classified into genetics and maturation, and other various biological factors which can also help to determine brain potential especially during the period of brain growth spurt. At the same time, outside factors such as social class, culture, family, background, schooling and cognitive factors are intercorrelated and cannot be separated. Both inside and outside factors are crucial for the development of intellectual skills.

From another angle, Berman (1999) sees intelligence being divided into two major views; traditional and modern. Berman believes that the traditional view of "intelligence" concentrates on a narrow and objective scope in interpreting intelligence. For examples, when answering calculation, reading comprehension and so on. In other words, intelligence is regarded as a separate component in life. However, MI theory accepts "intelligence" as a broader and subjective scope which is part of our life.

According to Berman (1999), when comparing or differentiating concept of traditional views of intelligence and MI, the stress should be on the purpose and target of knowing the intelligence. The traditional view of intelligence such as Stanford-Binet Intelligence Quotient, Wechsler Intelligence Scale for children (WISCIV), Woodcock Johnson Test of Cognitive Ability and Scholastic Aptitude Test (SAT) only focus on

certain purpose such as the ability to solve Mathematical problems, Reading Comprehension and others. Whereas for MI, intelligence is viewed as more relevant because the assessment of an individual's MI can foster learning and problem-solving styles. Short answer tests are not used because they do not measure disciplinary mastery or deep understanding. Furthermore, MI does not restrict the learners with a rigid test and at the same time the result of the test reflect not only the main intelligence possessed by an individual but also other minor intelligences. Consequently, it is up to the individual to develop the minor intelligences or not.

Basically, Berman's idea is also stressed by other scholars of different areas such as the biologists who stress the ability to adapt to the demands of the environment; the educationalists, in the people's ability to learn; some psychologists emphasize the measurement of the ability to reason and other cognitive functions, and probably, we the laymen would give a general meaning that intelligence must be seen as multifaceted or perhaps some may believe or give opinions which imply that people can be intelligent in many different ways and these ways probably develop with age from childhood to adulthood (Pyle,1979). Since the concept of intelligence is elusive, it has generally been defined by psychologists as that which is measured by intelligence tests (Sternberg, 1986). Hence, the definitions of "intelligence" can be grouped into two main thoughts, as shown below:

Table 1: A summary of Scholars and Definitions of "Intelligence"

Scholars	Definitions/Thoughts
Binet (1966), Terman (1970), Vernom (1966), Burt (1967), Echsler (1973), Piaget (1969)	It is more on solving problems in life
Spearman (1975), Heim (1975)	More on achieving a specific goal such as examination

1.9 Intelligence and Second Language Learning

The research of language learning began in 1960s. Particularly, developments in cognitive psychology have influenced much of the research done on language learning strategies (William and Burden, 1997). In most of the research on language learning strategies, the primary concern has been on "identifying what good language learners report they do to learn a second or foreign language, or, in some cases, are observed doing while learning a second or foreign language" (Rubin and Wenden, 1987).

Monitor Theory hypothesizes that adults have two independent systems for developing ability in second languages, subconscious language **acquisition** and conscious language **learning**, and that these systems are interrelated in a definite way. However, subconscious acquisition appears to be far more important (Campbell, 1999). According to Krashen (1985), language acquisition is very similar to the process children use in acquiring first and second languages. It requires meaningful interaction in the

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target language. In natural communication, speakers are not concerned with the form of their utterances but with the messages they are conveying and their understanding (Carreiro, 1997). On the other hand, language learning is thought to be helped a great deal by error correction and the presentation of explicit rules.

In addition, it is good to bear in mind that research on second language learning has shown that there are many misconceptions about how children or students learn languages. Teachers need to be aware of these research findings and to unlearn old ways of thinking (Cotton, 1995). The perception that "the younger the child, the more skilled in acquiring a second language" hypothesis does not have strong empirical support in school context. The research suggests that younger children do not necessarily have an advantage over older children, and because of their cognitive and experiential limitations when compared to older children who are actually at a disadvantage in how quickly they learn a second language (Cotton, 1995). Therefore, because second language acquisition takes time, children will continue to need the support of their first language and although younger children may have an advantage in pronunciation, older students will show quicker gains (Bloom, 1993). In fact, in a controlled research conducted by Bloom, it was found that in both formal and informal learning situations, adult and adolescent learners were shown to perform better than young children. This is because when children from some cultural background are extremely anxious when singled out and called upon to perform in a language they are actually in the process of learning.

Hence, this means quick and easy solutions are not appropriate for complex problems. Second language learning by school-aged children takes longer, is harder, and involves a great deal more that most teachers have been led to believe (Armstrong, 1987). Too often one hears of the "problem" of cultural and linguistic diversity in rural schools, rather than the "opportunity" that diversity provides. Children from diverse backgrounds enrich our schools and our other students. Student diversity challenges the educational system, but educational innovations and instructional strategies that are effective with diverse students can benefit all students.

Besides the researches done by the US National Center for Research on Cultural Diversity and Second Language Learning, many other investigators on instructional conversations, active learning, mixed ability groupings, collaborative learning, holistic instruction, and authentic assessment have directed their researchers at children's positive learning. These researches believed that if they managed to find the best way in teaching the children, they would be able to solve the learning problems faced by adults. As a result, the challenge of education with diverse students effectively promotes the needed educational reform at all levels and for all students, from the lower level which is primary or even kindergarten (Campbell, 1999). This is to ensure that all students from every level would be able to excel in their studies. This means, whatever strategies used or adopted in teaching students language, there should be considerations that the students have varied perceptions and understandings towards the language taught. Thus, interest or motivation of learning should be of prime concern.

1.10 Multiple Intelligences in the Language Classroom

It is imperative that teachers provide a safe learning environment, treat language learning as a "social" process where comprehensible input is a must when expecting comprehensible output. Most importantly, a language teacher (foreign or second language teachers) must provide students with adequate teaching methodology and time, as well as appropriate vocabulary and learning activities that will allow for the development of verbal skills (Fogarty, 1997).

There is no single best way to teach (Webber, 1999). The question teachers must address is which methods are best employed during the different stages of the teaching and learning process and then design a curriculum to meet their final objectives or goals.

Lazaer's view (1999) of Gardner's Multiple Intelligences combination methods, is that it enhances the students' capability not only in learning second language but also in other subjects or lessons. According to him although there are so many methods of teaching language, we cannot reject the understanding that MI is part of the whole method.

There are many different approaches to the teaching of language that are being practised all over the world. The Grammar Translation Method was introduced to have the students do most of the talking and interaction among themselves; Suggestopedia stresses on the role of environment such as low lighting and soft music in order to 'entice' the students to imagine and play with the language; Communicative Method, encourages the creation of a realistic context for language acquisition in the classroom; Total Physical Response Method stresses on listening comprehension and lastly, Total Physical Responses Story Telling Method uses story telling to make students acquire the language (Lazaer, 1999). After scrutinizing all these common methods, it is clear that Gardner's theory is already **IN** the methods.

1.11 Technology Resource Guide

Since MI is still new in Malaysia, there are many approaches towards applying MI in the classroom which should be considered. The researcher has adopted Gardner's article in Distance Learning Resource Network (DLRN) (www.dlrn.org /library/dll /guide5.html), as a guide in achieving the objectives. Gardner challenges that an educational system assumes that everyone can learn the same materials in the same way and that a uniform, universal measure suffices to test student learning. As currently constituted, our educational system is heavily biased toward linguistic modes of instruction and assessment and, to a somewhat lesser degree, toward logical-quantitative modes as well.

Gardner wrote:

> A contrasting set of assumptions is more likely to be educationally effective. Students learn in ways that are identifiably distinctive. The broad spectrum of students- and perhaps the society as a whole- would be better served if disciplines could be presented in a number of ways and learning could be assessed through a variety of means (all the seven intelligences) (1983: 70).

He believes that a variety of decisions must be made when choosing media that is appropriate to learning styles. Based on this belief, Table 2 below is used as a guideline in combining media and learning styles to make full use of MI:

Table 2: Media and learning styles

Media and learning styles	Importance
Visuals	Help students acquire concrete concepts, such as object identification, spatial relationship and motor skills where words alone are insufficient.
Printed words	As there is disagreement about audio's superiority to print for effective objectives; several models do not recommend verbal sound if it is not part of the task to be learned.
Sound	Presents a stimulus for recall or sound recognition and is recommended for poor readers.

Motion	Used to depict human performance for learners to copy the movement and measure their performance.
Color	Decisions on color display are required if an object's color is relevant to what is being learned.
Relia	Use with individuals or groups to present information realistically.
Instructional setting	To be delivered in an individualized mode to allow learners to set the learning pace.
Learner Characteristics	To help identify media that is most suitable for different types of learners.
Reading ability	Pictures for poor readers to facilitate learning and control the pace as print allows easier review.
Categories of learning outcomes	To identify the type of stimuli to present events, and media which is capable of presenting the stimuli.
Events of instruction	The external events, which support internal learning processes, are called events of instruction which instruction is planned before selecting the media to present it.
Performance	Many models discuss eliciting performance where the student practices the task, which sets the stage for reinforcement. Several models indicate that the elicited performance should be categorized by type; overt, covert, motor, verbal, constructed, and select.

Media selected should be able to elicit these responses and the response frequency. One model advocates a behavioral approach so that media is chosen to elicit responses for practice. To provide feedback about the student's response, an interactive medium might be chosen, but any medium can provide feedback. Learner characteristics such as error proneness and anxiety should influence media selection.

All of these media and learning styles determine the success of acquiring the language and can assist in applying the theory of MI in Second Language Learning. Testing which is traditionally accomplished through print may be handled by electronic media. Media are able to assess learners' visual skills better than print media. It can also be used to assess learner's performance in realistic situations (Fogarty, 1998).

In brief, Gardner stresses the importance of using various media and learning styles in carrying out MI activities. This is to ensure that a student gets and understands well what he has been learning. The theory of MI shares some common ideas with other theories of individual differences such as Cronbach & Snow, Gulford and Sternberg (Chapman, 1993). These ideas concentrate on effective and relevant aids and also various teaching strategies in assisting the language teachers to ensure that the students understand the language and achieve the learning objectives. At the same time, the use of aids or media and effective teaching strategies will be used as a clue to the students to remember or apply certain activity or the content of the lesson. For example, the use of

striking colours in locating specific information in a written text will help the students to identify the parts of speech: red for verbs, blue for article, yellow for nouns and so on.